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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
RAMIREZ, ARMANDO P				
ART UNIT		PAPER NUMBER		
4152				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/563,000

Applicant(s)

BERTIN-MOUROT ET AL.

Examiner

Armando P. Ramirez

Art Unit

4152

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/309)
Paper No(s)/Mail Date 10/06/2008
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
2. It is noted that this application appears to claim subject matter disclosed in prior Application PCT/FR04/01717, filed July 02, 2004. A reference to the prior application must be inserted as the first sentence(s) of the specification of this application or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c). See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, 121, or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference

required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If the reference to the prior application was previously submitted within the time period set forth in 37 CFR 1.78(a), but not in the first sentence(s) of the specification or an application data sheet (ADS) as required by 37 CFR 1.78(a) (e.g., if the reference was submitted in an oath or declaration or the application transmittal letter), and the information concerning the benefit claim was recognized by the Office as shown by its inclusion on the first filing receipt, the petition under 37 CFR 1.78(a) and the surcharge under 37 CFR 1.17(t) are not required. Applicant is still required to submit the reference in compliance with 37 CFR 1.78(a) by filing an amendment to the first sentence(s) of the specification or an ADS. See MPEP § 201.11.

Information Disclosure Statement

3. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

4. The abstract of the disclosure is objected to because it is composed of two paragraphs. Correction is required. See MPEP § 608.01(b).

5. The disclosure is objected to because of the following informalities: A) "Certain LCD screens of the prior art incorporate:" no prior art is listed by the applicant that describes the aforementioned material (Page. 1, line 23); B) "The binder possesses an index," should read --the binder possesses a refractive index--(Page. 6, line 1); C) "thermosetting resins, acrylics, etc." should read --thermosetting resins, acrylics--(Page. 7, line 3); D) "flow coating, by spraying, etc." should read --flow coating, by spraying--(Page. 7, line 17); E) "films sold by 3MTM under the reference numbers 3635-30 or 3635-70" (Page. 8, line 7) is not a proper recitation of the discussed films because reference product numbers can be changed arbitrarily by the manufacture; F) "for example, liquid crystals sold by Merck....." (Page. 9, line 3) is not a proper recitation of the discussed liquid crystals because the inventory of liquid crystals can be changed arbitrarily by the manufacture; G) "for example, those sold by Moxtek" (Page. 9, line 6)

is not a proper recitation of the discussed wire-grid polarizer films because the inventory of polarizer films can be changed arbitrarily by the manufacture

Appropriate correction is required.

6. The attempt to incorporate subject matter into this application by reference to "wire-grid type (for example those sold by Moxtek)" is ineffective because upon executing the web search pertaining to the "wire-grid" polarizer no information is found that fully describes the polarizer. Furthermore, any information that could be available can be changed at the discretion of Moxtek, which could arise to ambiguous descriptions of the "wire-grid" polarizer. Appropriate correction is required.

Claim Objections

7. Claims 2-4, 9-13, 15-17, and 19 are objected to because of the following informalities:

With regard to Claim 2, "designed to filter in the" should read -designed to filter out light in the-.

With regard to Claim 3, "essentially" should read -essential-.

With regard to Claim 4, "PVB-based" should state the actual chemical name and not the abbreviation.

With regard to Claim 10, "LCD" should read -liquid crystal display-.

With regard to Claim 17, "0.5 to 3 mm" should state the units, such as -.5 mm to 3 mm-.

8. With regard to Claim 19, "further comprising a glass substrate on which the at least one diffusing layer and sax the at least one thermoplastic sheet are placed..."

should read: - further comprising a glass substrate on which the at least one diffusing layer and the at least one thermoplastic sheet are placed...-.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claim 6 recites the limitation of a "reflective polarizer of the 'wire-grid type'" in line 3 of page 3. There is insufficient antecedent basis for this limitation in the claim. Furthermore, the specification fails to provide support for this limitation as discussed above. Still further, the addition of "type" in this instance extends the scope such to make it indefinite, see MPEP 2173.05(c) E.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-5, 8-14, and 16-18, are rejected under 35 U.S.C. 102(b) as being anticipated by Kuzuhara (US 2002/0041352 A1).

Kuzuhara teaches with respect to Claim 1, the claimed diffusing structure (polarizing plate, Abstract, line 6) comprising at least one diffusing layer intended to make a light source uniform (polarizer, [0341]), and at least one thermoplastic sheet (polyvinyl chloride, considered to be a thermoplastic, [0391], cellulose ester, considered to be a thermoplastic, [0191]) designed to filter out part of the electromagnetic wave spectrum of said light source. In principle, all thermoplastics filter out part of the electromagnetic wave, however, Kuzuhara further teaches that "The cellulose ester film support according to the invention preferably has a function to cut off ultraviolet rays since the support is installed in a liquid crystal display which may be sometimes employed outdoor."

With regard to Claim 2 (Currently Amended), Kuzuhara teaches the claimed diffusing structure, wherein the at least one thermoplastic sheet is designed to filter in the wave range of from 0.28 μm to 0.40 μm (less than 370 nm, [0192]). Kuzuhara states that "Preferably employed are UV absorbers which are excellent in absorbing ultraviolet radiation having a wavelength of less than 370 nm to minimize degradation of the liquid crystal and absorb as little as possible visible light of wavelengths of more than 400 nm ([0192]).

With regard to Claim 3 (Currently Amended), Kuzuhara teaches the invention set forth above, but does not specifically discuss the claimed mineral element. If the applicant is attempting to claim inorganic oxides, Kuzuhara teaches inorganic oxides ([0237]). If the applicant is attempting to claim metals, Kuzuhara further teaches the use of metals ([0237]).

With respect to Claim 4 (Currently Amended), Kuzuhara teaches the claimed diffusing structure comprising a PVB-based thermoplastic sheet (polyvinyl butyral resin, is considered to be a PVB-based thermoplastic sheet, [0354]).

With respect to Claim 5 (Currently Amended), Kuzuhara further teaches the claimed diffusing structure further comprising a reflective polarizer selected from the group consisting of birefringent multilayers ([0231]). Kuzuhara teaches that, "As a result, by combining said transparent support with said optically anisotropic layer, it is possible to optically compensate birefringent properties specific to the driving liquid crystal cell of a liquid crystal display apparatus." ([0231]). Furthermore, in principle all polarizers will reflect incident light.

With regard to Claim 8 (Currently Amended), Kuzuhara teaches the claimed diffusing structure comprising a plastic sheet for controlling the viewing angle or for shaping the light (compensation film, considered to be plastic sheet, [0027]). Kuzuhara states that, "The optical compensation film, described in 1 through 8 above, wherein said rod-shaped liquid crystalline compound optically exhibits positive uniaxial properties and the plane retardation value of the optically anisotropic layer is in the range of from 10 to 300 nm and the retardation value in the thickness direction is in the range of 15 to 300 nm." Retardation films are used and known to control the viewing angle of liquid crystal displays. Furthermore, Kuzuhara states that, "An objective of the present invention is to provide an optical compensation film which readily improves viewing angle characteristics..." ([0017]).

With regard to Claim 9 (Currently Amended), Kuzuhara teaches the claimed diffusing structure, wherein the at least one thermoplastic sheet is a lamination interlayer ([0409]). Kuzuhara states that, "The polarizer, obtained as above, is laminated with a cellulose ester film." ([0409]).

With regard to Claim 10 (Currently Amended), Kuzuhara teaches the claimed diffusing structure comprising an LCD matrix assembly ([0103]). Kuzuhara states that, "matrix type TN type liquid crystal display apparatus, specifically employed as a full color display." ([0103]).

With regard to Claim 11 (Currently Amended), Kuzuhara teaches the claimed diffusing structure, further comprising a substrate (liquid crystalline compound, considered to be a substrate, [0080]), wherein the at least one diffusing layer is deposited on one of the faces of said substrate (polarizing plate, considered a diffusing layer, [0080]), and wherein the at least one thermoplastic sheet is deposited on the opposite face of said substrate (transparent support, is a cellulose ester [0061] considered to be a thermoplastic, [0080]). Kuzuhara states that, "The polarizing plate, described in 61 above, wherein a liquid crystalline compound orientation fixed layer (also called an optically anisotropic layer) is disposed between a transparent support and a polarizing plate," ([0080]).

With regard to Claim 12 (Currently Amended), Kuzuhara teaches the claimed diffusing structure, wherein the at least one diffusing layer comprises a diffusing plastic film ("polarizer adhere with a protective film," [0341]). Kuzuhara states that, "Listed as materials of said protective layer as well as said intermediate layer may be polymethyl

methacrylate, acrylic acid/methacrylic acid copolymers, styrene/anhydride maleimide copolymers, polyvinyl alcohol," which are considered to be plastic.

With respect to Claim 13 (Currently Amended), Kuzuhara teaches the claimed diffusing structure, wherein the at least one diffusing layer comprises a diffusing layer comprising particles ([0150]) and a binder, wherein the binder allows the particles to agglomerate ("These fine particles usually exist in an aggregated form in the film," [0150]). Kuzuhara teaches the invention set forth above, but does not specifically discuss the claimed binder, which based on the applicant's specification is a mineral (Page. 6, line 23). If the applicant is attempting to claim inorganic oxides, Kuzuhara teaches inorganic oxides ([0237]). If the applicant is attempting to claim metals, Kuzuhara further teaches the use of metals ([0237]). If the applicant is attempting to claim an organic adhesive, Kuzuhara teaches "adhesive comprised of a 5 percent aqueous completely saponified type polyvinyl alcohol solution," ([0608]).

With regard to Claim 14 (Original), Kuzuhara teaches the claimed diffusing structure, characterized in that the particles are metal oxide particles ("particles including silicon dioxide, titanium dioxide," considered to be metal oxide particles, [0149]).

With regard to Claim 16 (Currently Amended), Kuzuhara teaches the claimed diffusing structure, wherein the binder is a mineral binder. Kuzuhara teaches the invention set forth above, but does not specifically discuss the claimed binder, which based on the applicant's specification is a mineral (Page. 6, line 23). If the applicant is attempting to claim inorganic oxides, Kuzuhara teaches inorganic oxides ([0237]). If the

applicant is attempting to claim metals, Kuzuhara further teaches the use of metals ([0237]). If the applicant is attempting to claim an organic adhesive, Kuzuhara teaches "adhesive comprised of a 5 percent aqueous completely saponified type polyvinyl alcohol solution," ([0608]).

With regard to Claim 17 (Currently Amended), Kuzuhara teaches the claimed diffusing structure, wherein the diffusing structure has a thickness of from 0.5 and to 3 mm (1 mm, [0593]). Kuzuhara states that, "100 squares having a side length of 1 mm were made." ([0593]).

With regard to Claim 18 (Currently Amended), Kuzuhara teaches the claimed diffusing structure, wherein the diffusing structure further comprises a coating comprising a function selected from the group consisting of these having an antistatic function ([0200]). Kuzuhara states that, "In addition to the aforementioned compounds, further, added may be antistatic agents, flame retarders, lubricants, oils, and the like." ([0200]).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

16. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzuhara (US 2002/0041352 A1) in view of Mizushima (US 2004/0212885).

Kuzuhara teaches with regard to Claim 6, the invention set forth above except for the claimed reflective polarizer of the wire-grid type. Mizushima, however, teaches the claimed reflective polarizer of the wire-grid type ([0085]). Mizushima states that, "A reflective grid polarizer may be preferably used as the anisotropic reflective polarizing element. An example of the reflective grid polarizer is Micro Wires made by Moxtek, Inc." ([0085]).

Kuzuhara and Mizushima are analogous art because they are from the same field of endeavor, such as optical films. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Kuzuhara and Mizushima before him or her, to modify the film of Kuzuhara to include the reflective polarizer of the wire-grid type of Mizushima because Kuzuhara and Mizushima teach the claimed combined subject matter. The motivation for doing so would be to optimize a diffusing structure in order "to have both high transmittance and high polarizing efficiency to provide an image bright and good in color reproducibility." (Mizushima,

[0002]). Therefore, it would have been obvious to combine Kuzuhara and Mizushima to obtain the invention as specified in the instant claims.

17. Claims 7, 15, 19, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzuhara (US 2002/0041352 A1).

With respect to Claim 7 (Currently Amended), Kuzuhara teaches the claimed diffusing structure comprising a plastic sheet coated with a transparent metal oxide layer (TiO_2 , is considered to be a metal oxide, [0237]). Kuzuhara states that, "The evaporation substance for the inorganic oblique evaporation film include representatively SiO_2 , and further metal oxides such as TiO_2 and ZnO_2 , fluorides such as MgF_2 , and metals such as Au and Al." ([0237]). It would have been extremely obvious at the time of the invention to one skilled in the art of LCD's to use a sheet of transparent metal oxide, otherwise the mere essence of the invention would be rendered obsolete if one of the sheets were not transparent.

With regard to Claim 15 (Currently Amended), Kuzuhara teaches the claimed diffusing structure, wherein the size of the particles is from 50 nm to 1 μm ([0150]). Kuzuhara states that, "Accordingly, the average primary particles diameter of fine particles is no more than 0.1 μm , preferably between 5 and 50 nm, and more preferably between 7 and 14 nm." ([0150]). It would have been extremely obvious at the time of the invention to one skilled in the art of optical films and nano-particles, to claim the fragmented ranges as reported by Kuzuhara and state them in a continuous range as claimed by the applicant.

Kuzuhara teaches with regard to Claim 19 (Currently Amended), the claimed diffusing structure, further comprising a glass substrate on which the at least one diffusing layer (liquid crystalline compound, is considered the diffusing layer Abstract, line 4) and sax the at least one thermoplastic sheet (cellulose ester film, considered to be a thermoplastic layer, Abstract, lines 5-6) are placed, the wherein the glass substrate comprises a light transmission T_L of not less than 90% ([0190]). Kuzuhara states that, "The transmittance of anisotropic layer in the range of visible light is preferably 80% or more." ([0190]). It would be extremely obvious to one of ordinary skill in the art of LCD's at the time of the invention, to modify the glass of the LCD for the intended use. Furthermore, Kazuhara teaches the used of glass with the claimed invention ([0302]).

In terms of the optimum light transmission T_L values of the claimed diffusing structure, however, it would have been obvious to one having ordinary skill in the art of optical films at the time of the invention to adjust the thickness of the glass in order to optimize the transmission of light going through the diffusing structure for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

With respect to Claim 24 (New), Kuzuhara further teaches the claimed diffusing structure further comprising a reflective polarizer chosen selected from the group consisting of birefringent multilayers ([0231]). Kuzuhara teaches that, "As a result, by combining said transparent support with said optically anisotropic layer, it is possible to optically compensate birefringent properties specific to the driving liquid crystal cell of a

liquid crystal display apparatus." ([0231]). Furthermore, in principle all polarizers will reflect incident light. Kuzuhara does not explicitly label the layers as "birefringent multilayers," but it is obvious from the above Kazuhara quote that if the two layers are combined they form a multilayer and it displays birefringent properties, then one would consider the article to be labeled as "birefringent multilayers."

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ouderkirk (6,096,375) teaches optical polarizers, and Nevitt (US 6,268,961) also teaches optical films which contain particles.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Armando P. Ramirez whose telephone number is (571) 270-7083. The examiner can normally be reached on Monday - Thursday 8:00 AM - 7:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Del Sole can be reached on (571)272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. P. R./

/Joseph S. Del Sole/
Supervisory Patent Examiner, Art Unit 4152